

MAN IN EGYPT HALF A MILLION YEARS AGO

Conclusions Reached by Robert de Rustafjaell After Ten Years Research in the Thebaid

By E. W. POWELL.

That man existed more than half a million years ago and that the neighborhood of Thebes in upper Egypt is the region to which his earliest developments have been traced is the theory established upon material evidence by Robert de Rustafjaell, F. R. G. S., who has recently brought to America an anthropological collection which in all probability will be the last allowed to leave Egypt, since the new law regulating the exportation of antiquities has come into force.

Mr. de Rustafjaell is a well known archaeologist, a member of various learned societies in England and a bey of the imperial Ottoman Empire. His latest publication is "The Stone Age in Egypt." His other books are "Palaeolithic Vessels in Egypt," printed in 1907; "The Origin of Painting on Clay in Egypt," printed in 1906; "Cave" in 1902 in the *Journal of Hellenic Studies*; and "Remains of the Mammoth in the Bering Sea Islands," in 1899.

to say much older than a quarter of a million years. This is the nearest date assigned to the end of the pre-Glacial period by Dr. Croft, who bases his deduction on astronomical observations. Sir John Lyell believes it began 800,000 years ago, and one of the geological magazines suggests that man made his appearance during the Pliocene period, which is supposed to have begun 3,500,000 and terminated 2,800,000 years ago.

It cannot be claimed that there are hand made European implements as early as the Egyptian. The Eolithics, conceded to be the oldest and generally thought to be pre-Glacial, Mr. de Rustafjaell is inclined to think belong to a period corresponding in age to the Egyptian late Palaeolithic, inasmuch as they are industrial in character, the stage of the chase and fishing and in certain countries pastoral life preceding the stage of industry in man's development.

It was when the soil was in process of being deposited along the Nile Valley, carried there from the mountains of Abyssinia and the Central African plateau, that man first made his appearance in Egypt. Man followed the soil. He did not precede it, nor did he come from where there was none. He



Old known sculpture—Figure of man in unglazed clay 1½ feet high. Predynastic period, Thebaid.

Wonderful Collection of Flints Includes Earliest Evidence of Man Yet Found Anywhere—New Theory of Nile

one of Mr. de Rustafjaell's most recent discoveries, has yielded some of the most amazing and illuminating memorials of the period. Nowhere have been found finer ripple flaked knives of thin flint nor more beautifully finished flint and shell ornaments. Unique are the flint silhouettes found there representing chickens, pigeons, a falcon, dogs, cats, goats, cows, a camel and a man. All but two are carved on one side only. They were probably intended for toys. The pottery from this site is thinner, lighter in color and more primitive than many other specimens of the period.

The great marvel is the mastery skill these ancient artisans must have acquired to have devised their exquisite saws, scrapers, single and double edged knives and other tools. On some the serrations are so fine they are almost imperceptible. The largest are eight inches long by one inch wide, and the smallest are half an inch long and barely one-eighth of an inch wide.

Burial of the dead first became a custom during the Neolithic period. If it had been so in preceding ages some funerary remains would have come down to us, the dry climate and the perpetual sunshine of Upper

hands over their heads. The mode of wearing the hair is strangely similar to that of the Nubian women of today. The sculpture of the Neolithic period is the oldest yet discovered and though the attempts be crude "their realism and finish find no parallel elsewhere." They help us to understand the great stride made in civilization in the Thebaid long before the establishment of the first dynasty of kings in Egypt.

WHEN TASTE FAILS

SINCE the war began the proprietor of a Broadway saloon and restaurant has constantly boasted that while other places were bound to run short of champagne he had seen trouble coming and had so arranged that he had an unlimited supply of the sparkling beverage.

A few days ago he was cheered with the news that he was a father for the fifth time. He is a child loving man and the frequency of the stork's visit has in no wise caloused his parental appreciation. As the day wore on he felt better every hour. Toward eve-



At left and right—Flint knappers from the XII. dynasty tombs at Beni Hasan.

It may be remembered that he found "The Further New Sayings of Christ" in 1904. In that find of manuscripts, among others, was the only Nubian volume in existence; it has not yet been read, the key to the language being unknown. There were two other remarkable manuscripts, the one in Greek and the other in Coptic, of the tenth and twelfth centuries respectively. The former describes the miracles of Saints Cosmas and Damian, and the latter is an apocryphal narrative by Saint Bartholomew of Christ's descent into hell. They are now in the British Museum.

It was he also who, in 1905, lighted upon the oldest painting on canvas yet discovered. This interesting specimen of art, which is now in this country, dates from 1600 B. C., and is in a perfect state of preservation, due no doubt to the overlapping of the top corners in the form of a foolscap, which protected the pigments and kept them bright.

Ten years ago, before he began to explore Egypt, Mr. de Rustafjaell devoted five years to tentative work at Cyzicus, an ancient Greek site in Asia Minor. In the main, however, despite his extraordinary finds of historic periods, this explorer has given his attention to research in the pre-history of Egypt, that is, to the time antedating B. C. 5000. And unlike representatives sent out from time to time by various museums and societies he makes his permanent home in Egypt. Hence his luck, perhaps, at all events he knows the country thoroughly and has roamed far and wide for weeks in the desert.

His prehistoric finds have been as interesting as those already mentioned. Most important is his collection of flints, beyond a doubt the most comprehensive in existence. It includes the earliest evidence of man yet found anywhere and represents every phase of his progress without interruption down through countless ages into historic times.

It is now possible to assign an indisputable relative age to Egyptian hand worked flints. Those in Mr. de Rustafjaell's collection were found on "factory sites" near the fringes of the desert, lying exposed to the sun, as they had been for thousands and thousands of years—perhaps a million years—just as the knappers had left them. In this remote, desolate locality it never rains, the air is still and man had no occasion to venture thither. As a consequence these flints remained undisturbed for countless ages with the sun steadily scorning their surfaces. And the sunburn, or patina, which they took on indicates their age, the color and the density being the factors considered.

In order to determine the depth and absolute certainty the implement was of course broken. But this is not necessary, for in addition to the color, the locality in which the specimen is found, its shape and its workmanship are generally sufficient indications.

Of Egyptian flint implements representing unbroken evolution in the art of chipping is due to the fact that flint did not become extinct in Egypt until the Glacial period, no catalyst occurring there to disturb the continuity of the country. It can hardly be imagined that there was a total extinction of the animal and vegetable life of the northern Asia and North Africa at this time, icebound as they were in Egypt, however, was far enough from the cold to be tempered, the result was merely a copious rainfall.

Most specimens in the collection are pre-Glacial or early Palaeolithic, in numerous terms in Egyptian geology, but considerably earlier than the European pre-Glacial. These flints are early Palaeolithic implements, display in cross section for the most part a patination three-sixteenths of an inch thick. But there are some with a patina as deep as a quarter of an inch. These must therefore be much older than the other flints, Palaeolithic implements, that is



Unbaked clay figure of a man with a dog's head and tail. Predynastic period, Thebaid.

came from the south. This was during the Miocene period.

To the sort of man he was some clue may be afforded, it is believed, by the famous Piltdown skull discovered in a layer of Pleistocene gravel in Essex, England, in 1912, by Messrs. Dawson and Smith-Woodward. This cranium belongs to the early Pleistocene or late Pliocene period and indicates that the human brain had already at that stage reached its full size. Dr. Elliot Smith maintains that the skull belonged to a man of the Simian species, devoid of speech. Such a man probably was the first user of flints, living in the open, using for shelter such cavities in the rocks and under the ledges as nature provided and finding in the neighborhood food and water sufficient for his needs, as well as the raw material for his weapons and tools.

"Thus sheltered and equipped," to quote Mr. de Rustafjaell, "he lived his simple and hazardous life, slowly improving as the centuries passed over him, for implements almost identical with the earlier type, though with thinner patina, appear side by side with others that display the same lesser density of patina, but have been more elaborately worked all over the surface. These latter are not unlike implements found at Stropcy in Belgium and Chelles in France, hitherto reckoned as the oldest of their kind."

The raw material at hand were green nodules of siliceous formation; in other words, raw flints. During the Eocene period each of these had formed around a sponge in limestone under the sea. It was during the following age, the Miocene period, that the floor of the sea emerged, raised by subterranean pressure; and the 450 feet of limestone over the substratum of what is known as Nubian limestone became the countries we now call Sahara and Arabia. The re-

ceding water washed the nodules out of the fractured surface.

"It was not until man's first entry into Egypt," Mr. de Rustafjaell maintains, "that man developed into a user of flint weapons and tools. Upper Egypt, therefore, must count as the oldest proved settlement of man in the world."

Mr. de Rustafjaell, incidentally, has an interesting theory in regard to the formation of the Nile. This so-called river was originally a fissure in the naked limestone and sandstone surface of north Africa, which had split as the sea arose. In time the streams from the south, following the course of least resistance, joined this fissure. Sediment now began slowly to fill its V-shaped channel. An obstruction at last was produced, and a dam formed. Then it was the Nile first overflowed and began to deposit the soil, which it carried in solution. It is estimated that on an average six inches of fertile earth is added throughout the valley every thousand years.

Further, he thinks that the Red Sea is a similar fissure, that oases are abrasions in the limestone, watered from the south through the porous limestone, and that the wadies or latitudinal valleys of the Nile are side fissures. The earliest traces of man are found near the estuaries of these wadies—and certainly man did not live far from his water supply. The Palaeolithic remains are found on the west side of the Nile, and he maintains therefore that the Nile flowed close to the

The early Palaeolithic implements are crudely shaped handstones for self-defence and choppers for breaking bones to get at the marrow. The most important specimen of the period in the collection—and indeed one of the most remarkable finds the owner has made—is a crude weapon bearing the petrified imprints of a human thumb and two fingers. The man who left these marks of his identity probably lived in the Glacial period, for the weapon must, when handled, have had some slight coating of loamy substance in which the impress could be left. The man had probably lifted the weapon from moist ground or had found it under other conditions which would account for such a covering of liquid clay and limestone in solution.

"Holding this humble flint in one's hand," says Mr. de Rustafjaell, "one felt with a strange thrill of awe that through this means one was brought into an almost direct contact with a phantom of the past, a past made suddenly real across the eons of time that remove the Egyptian of the Palaeolithic age from his descendants of to-day, who live in the same surroundings and under similar circumstances to those of their primitive ancestor."

Other significant discoveries by the same explorer are some chert, flint and limestone vessels of the late Palaeolithic or early Mesolithic period, found in a desolate wady, a waterless region, far distant from regular trails. They were originally naturally hollowed out concretionary formations,

figures of men knapping flints. They sit about objects supposed to be anvils. Mr. de Rustafjaell assumes that they are these water vessels; an anvil could not have been used for flint knapping, which requires free play for the force of the percussion to radiate in the direction of the blow. Vessels of this primitive type, like most things in Egypt, had doubtless become traditional, though admittedly the choppers at the later date may have been metallic.

It was in the Mesolithic period that agriculture developed and that carpentry and ship building probably began. The implements of this age include hoes similar to modern iron hoes, although the method of hafting differed. Crescent shaped scrapers to remove fat from hides and bark from wood for javelins and spearheads and cutting tools with heavy butt ends are plentiful. Arrow heads are unknown, although a well made spearhead has been found.

It was on a Mesolithic site, it may be mentioned, that a limestone lamp, resembling a hollowed out flatiron, was found. But so advanced a civilization as such a lamp would indicate cannot be postulated at so early a date. Lamps of identical form in bronze and stone were used in Egypt throughout historic times. And it is almost certain that this was the kind of lamp used by the builders of the tombs in the Valley of the Kings of Thebes.

The Neolithic period or New Stone Age began about 50,000 years ago and ended with the establishment of the



Palaeolithic cave shelter in the Wady, twenty miles west of the Nile, where the stone water vessels were found.

fringe of the desert in Palaeolithic times. And as Neolithic implements only are found along the Arabian Desert side of the river it must have flowed along the fringe of the eastern desert during Neolithic times. It has since meandered west and is now gradually cutting a new channel in the Thebaid toward its original Palaeolithic course again.

The Stone Age is divided into two periods for the better known countries in which flint implements are found. These are the Palaeolithic (or Old Stone) age and the Neolithic (or New Stone) age. And this transitional period between the Palaeolithic and the Neolithic ages is termed the Mesolithic age.

which man improved by shaping and turned to his purpose. Though there are no tool marks on the limestone vessels, it may be supposed that they would have been effaced from such perishable material by the attrition of the sand. One chert receptacle undoubtedly had large spalls removed from the sides and bottom to make it stand upright.

It may be presumed that these vessels were used by the flint knappers to hold water, which cleaned the grit from their choppers, and it is not improbable that they may be the "germ" from which sprang the art of making pottery.

There are in the tombs of Beni Hasan (of the twelfth dynasty) pic-

ture of men knapping flints. They sit about objects supposed to be anvils. Mr. de Rustafjaell assumes that they are these water vessels; an anvil could not have been used for flint knapping, which requires free play for the force of the percussion to radiate in the direction of the blow. Vessels of this primitive type, like most things in Egypt, had doubtless become traditional, though admittedly the choppers at the later date may have been metallic.

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This settlement near Kift, which is



Unbaked figure of a woman in the attitude of dancing. Predynastic period, Thebaid.

Egypt being natural embalmers, the earlier inhabitants doubtless abandoned their dead to be devoured by beasts of prey.

Naturally preserved bodies of the Neolithic period, however, have frequently been found, buried with hand shaped pottery, ornaments made of shell and stone, textiles, matting, baskets, clay figures, a variety of food-stuffs, kohl for makeup and other pigments, and palettes for grinding these paints. A jar of cheese in the collection is most interesting, as the substance still crumbles in the fingers and melts under fire. And there is a loaf of bread, almost petrified; but it can be seen that it was baked in layers. In all cases the body was buried in a crumpled position, or embryonic position, facing the east.

In one predynastic grave Mr. de Rustafjaell found among the usual objects a copper sword and a number of arrow points. This is the only known case in which a metal sword has been discovered in association with man of the predynastic period, and the fact lends some support to the theory of Prof. Elliot Smith that copper was discovered in Upper Egypt at the close of the Neolithic period.

"It was this new and more effective weapon which enabled the archaic Nile race of Upper Egypt to conquer the whole country. The earliest pyramids date back to this period."

In addition to a complete representation of predynastic pottery, the collection includes some extraordinarily interesting figures in clay. The largest is a statue of a man, half life size, holding a vase between his knees. It is excellently well preserved and remarkably realistic in execution. The others represent a man with a dog's head and tail and dancing women, bending forward with their

ning he could contain his joy within his individual compass no longer and so he made the news known and soon had a congratulatory gathering about him.

There were several rounds of drinks bought and finally one of the friends made such a felicitous little speech that the happy man felt himself overwhelmed. There was only one more thing that he felt he could do to prove his appreciation, and he did it.

"Bring us some wine—some champagne," he ordered.

And the gatherers were taken somewhat aback, for the proprietor, while not altogether parsimonious, has never been known to be exuberant in hospitality. But the wine was brought and several bottles were drunk.

"You'll not find many places along Broadway free with the real champagne just now," said the proprietor. "Do you know for a fact that there's been talk of hoisting the price quite a percentage because of the war? But I have plenty of it, plenty of it, gentlemen. I saw what was coming. Here's your health."

"Hrrr—the baby's health," they chorused.

"Isn't it good stuff?" the proprietor queried, appreciating his own wares as much as anybody in the world.

"You bet it is!" came the chorus again.

And then there was a smacking of lips and a holding of the head on one side with one eye shut and the other fixed on the effervescent sparkles from the bottom of each glass toward the rim. There was a union of "Ahs!" as the amber fluid disappeared. Touched by the appreciation the proprietor ordered more.

"I'm the boy that knows a wine when I taste it," said he authoritatively. "I have tested and tasted abroad and I've done the same here for years. I know a wine when I drink it, you can be sure."

"We'll have to drink American wine, though, if this war keeps on, won't we?" asked one of the wine guests.

"You must be a wine agent," said the proprietor contemptuously. "No body who wants the real champagne will ever be satisfied with American wine. It can't be got up to suit the taste. Once a man knows the real good thing he can't be satisfied with anything else. You may hear an American wine agent boast their wares, but the regular wine drinkers know different. Yes, sir; we know the difference. Here, let us have some more."

Now comes the funny part of the incident. The waiter who served his employer and the guests told the tale. Said he:

"The boss and his guests at the baby boost party were all drinking American wine. There were two reasons why they were drinking it. One was that our immediate supply of foreign wine was out. We had none in the cellar and would not be able to renew our stock till the next day."

"The other reason was that very often, yes, quite often, when the boss has been treated to wine by guests until he felt he had to treat back he has tipped us to use our judgment about shipping in American wine. A man in certain stages doesn't care where the grape was grown, and if he cared he doesn't know the difference. So for two reasons I served American wine."

"But can't the proprietor tell by the taste the kind of wine he drinks?" the waiter was asked. "Surely in honor of his baby he wanted to drink the real kind!"

"That's what puzzles me a little," said the waiter. "He ought to be able to tell, and so had two other men of the party. One is an American wine agent and the other a French intermediary. Yes, I'm puzzled. It's an even bet whether they knew the difference or whether they all kept still out of regard to the baby."